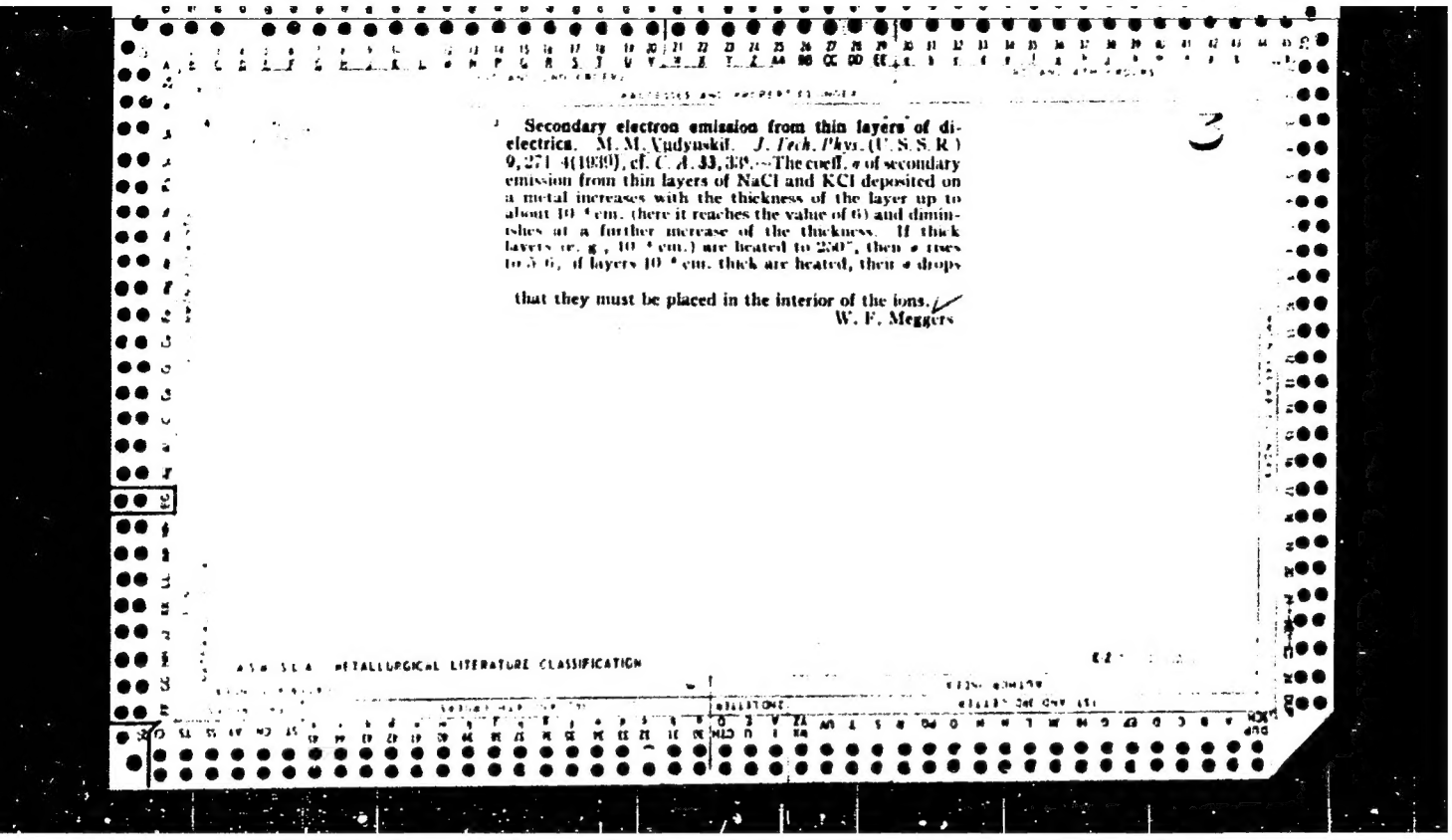
VUDVORD, R.B. [Woodward, R.B.], prof.

Total synthesis of chlorophyll. Zhur.VKHO 6 no.4:451-457 '61.
(MIRA 14:7)

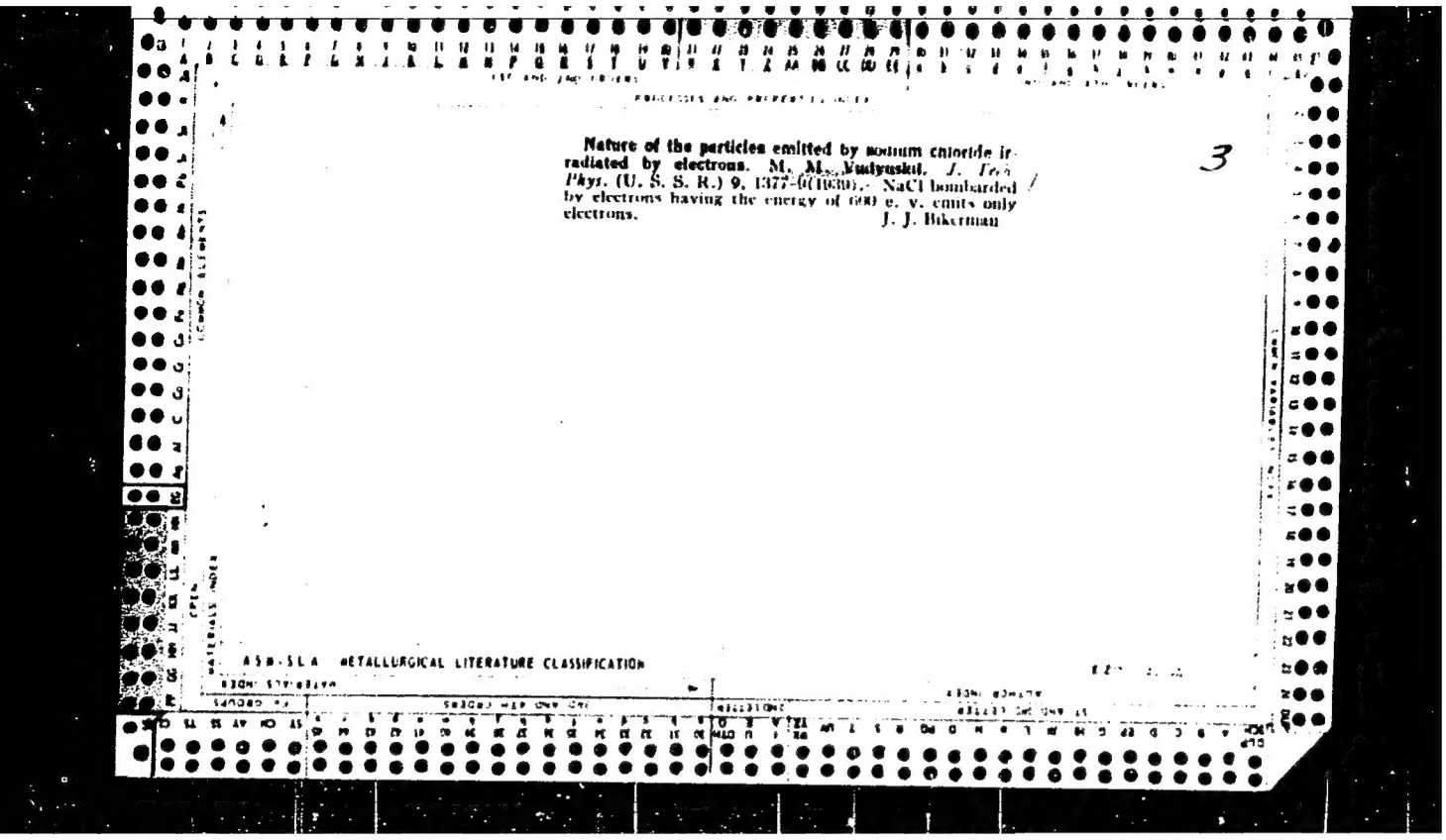
1. Garvardskiy universitete.
(Chlorophyll)



Secondary electron emission from thin layers of dielectrics. M. M. Yudynskiĭ. *J. Tech. Phys.* (U. S. S. R.) 9, 271–4(1939); cf. *C. A.* **33**, 339.—The coeff. σ of secondary emission from thin layers of NaCl and KCl deposited on a metal increases with the thickness of the layer up to about 10^{-4} cm. (here it reaches the value of 6) and diminishes at a further increase of the thickness. If thick layers (e. g., 10^{-3} cm.) are heated to 250°, then σ rises to 5–6; if layers 10^{-4} cm. thick are heated, their σ drops

that they must be placed in the interior of the ions.
W. F. Meggers

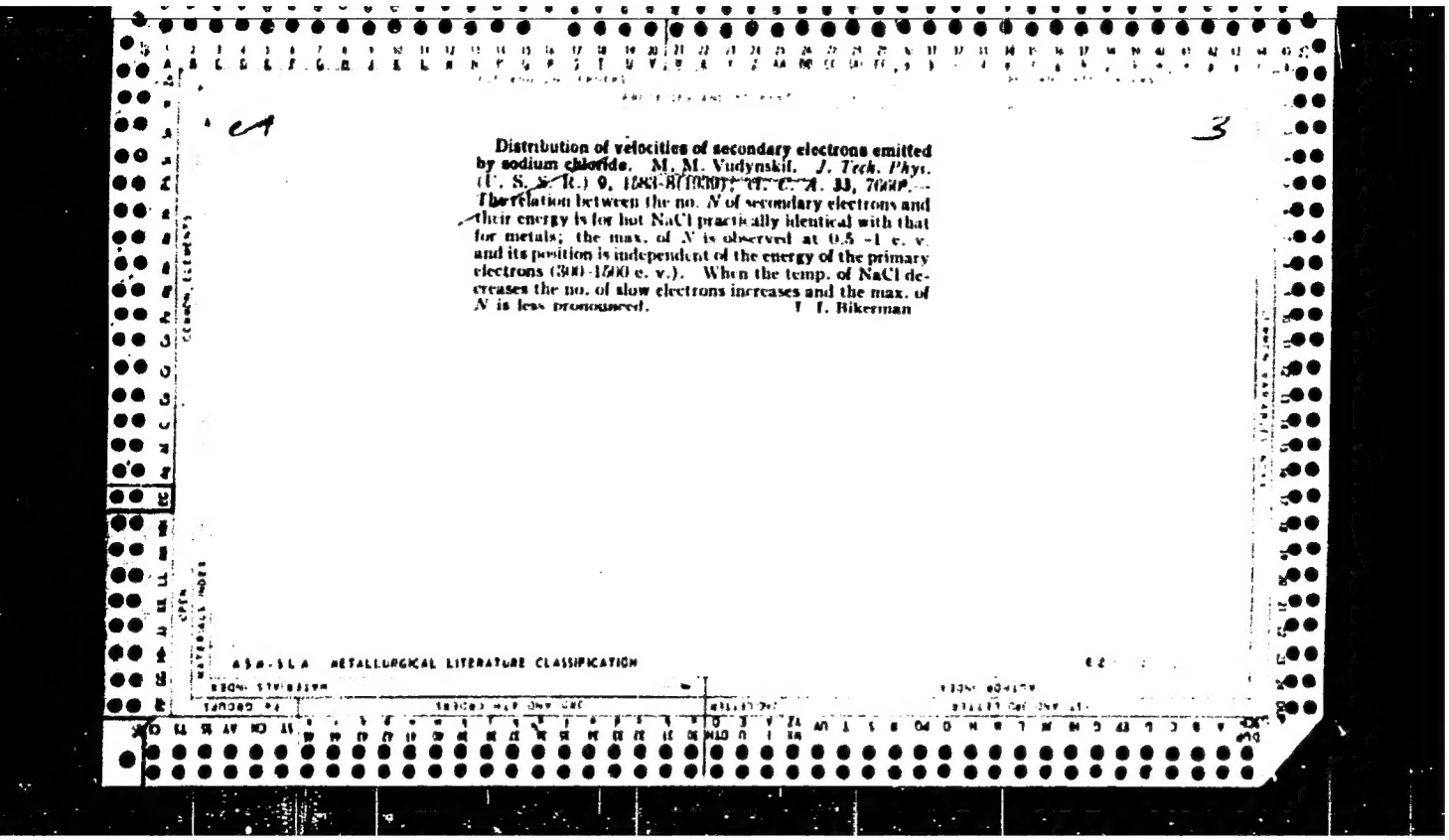
A S M S E A METALLURGICAL LITERATURE CLASSIFICATION



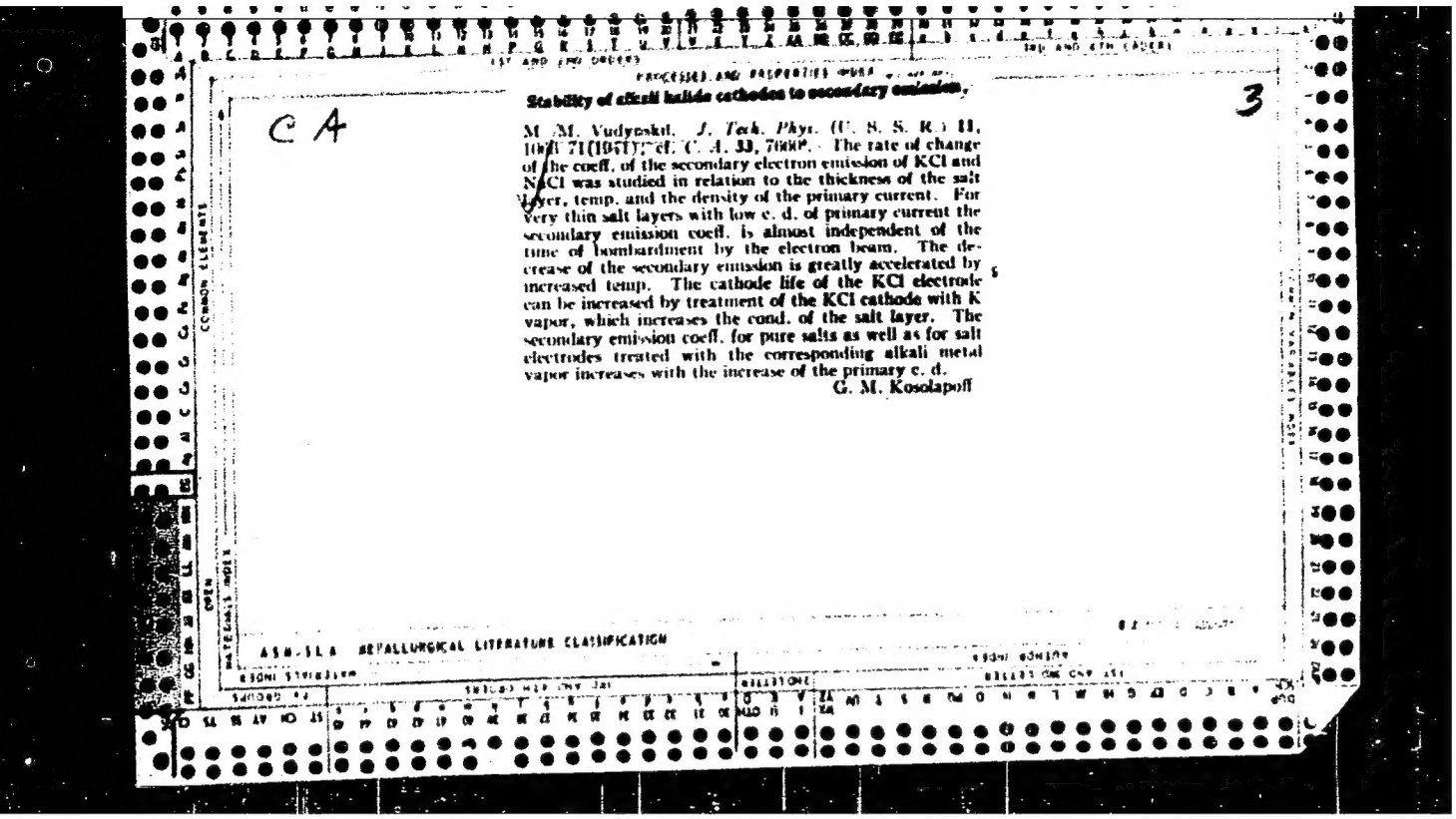
Nature of the particles emitted by sodium chloride irradiated by electrons. M. M. Yudyuskii. *J. Tech. Phys.* (U. S. S. R.) 9, 1377–9(1939). NaCl bombarded by electrons having the energy of 600 e. v. emits only electrons.
J. J. Bikerman

3

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Distribution of velocities of secondary electrons emitted by sodium chloride. M. M. Vudynskii. *J. Tech. Phys.* (U. S. S. R.) 9, 1881-8(1939); *C. C. A.* 33, 7009. The relation between the no. N of secondary electrons and their energy is for hot NaCl practically identical with that for metals; the max. of N is observed at 0.5 -1 e. v. and its position is independent of the energy of the primary electrons (300-1500 e. v.). When the temp. of NaCl decreases the no. of slow electrons increases and the max. of N is less pronounced. I. F. Bikerman



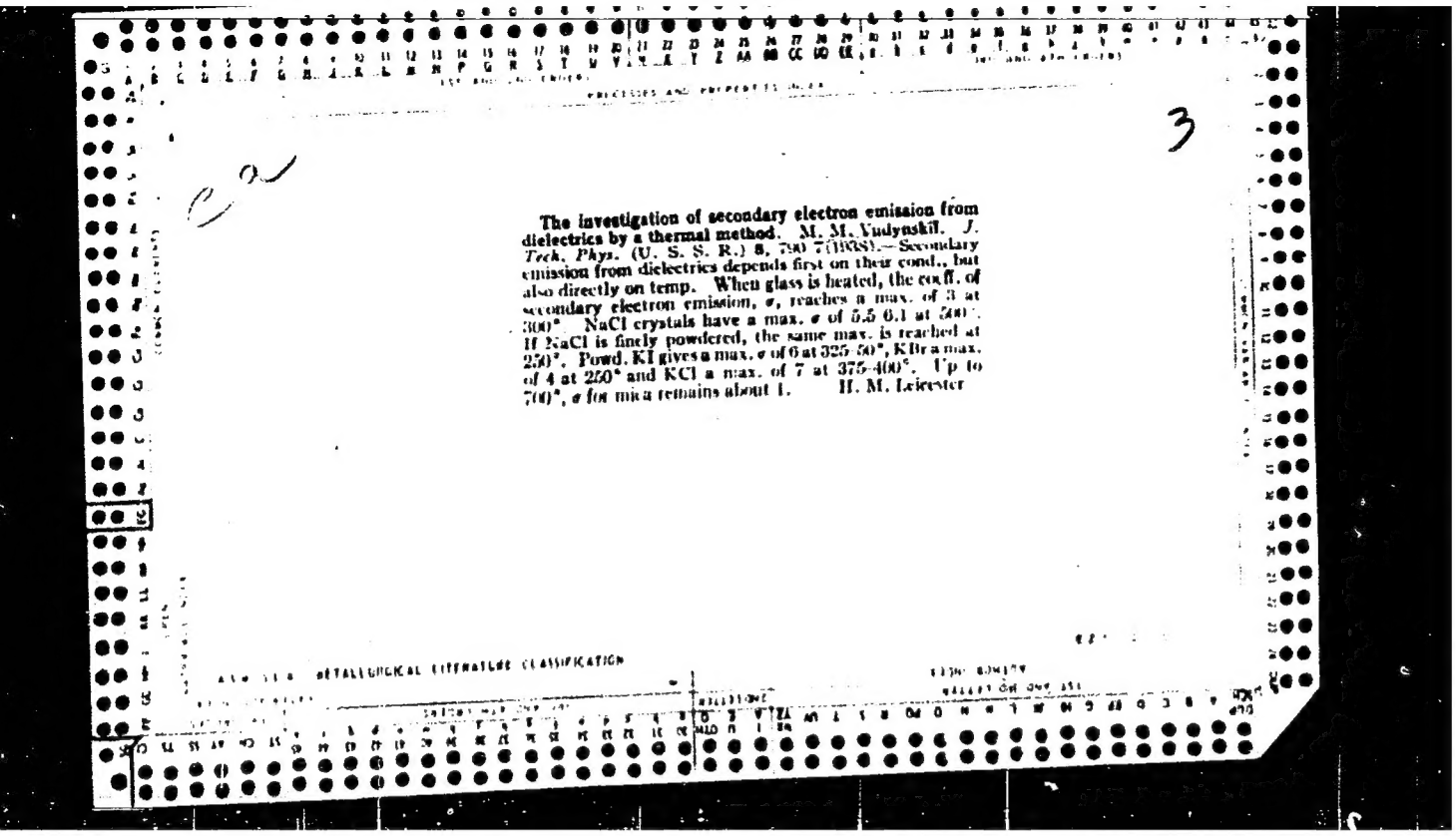
CA

3

Stability of alkali halide cathodes to secondary emission.

M. M. Vudynskii. *J. Tech. Phys.* (U. S. S. R.) **11**, 1067-71(1951); cf. C. A. **33**, 7000⁹. The rate of change of the coeff. of the secondary electron emission of KCl and NaCl was studied in relation to the thickness of the salt layer, temp. and the density of the primary current. For very thin salt layers with low c. d. of primary current the secondary emission coeff. is almost independent of the time of bombardment by the electron beam. The decrease of the secondary emission is greatly accelerated by increased temp. The cathode life of the KCl electrode can be increased by treatment of the KCl cathode with K vapor, which increases the cond. of the salt layer. The secondary emission coeff. for pure salts as well as for salt electrodes treated with the corresponding alkali metal vapor increases with the increase of the primary c. d.

G. M. Kosolapoff

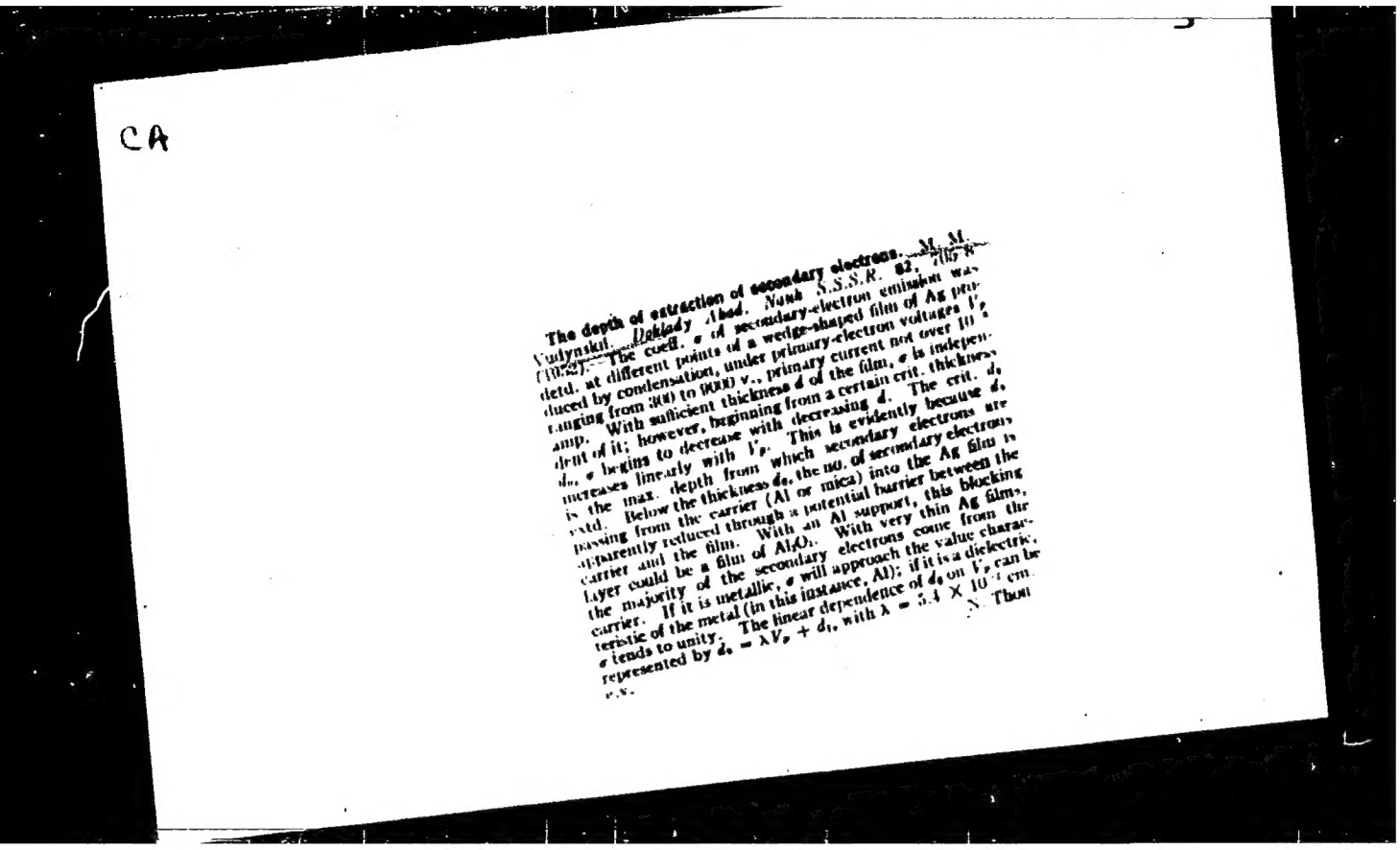


The investigation of secondary electron emission from dielectrics by a thermal method. M. M. Vudynskii. *J. Tech. Phys.* (U. S. S. R.) 8, 790-7 (1938).—Secondary emission from dielectrics depends first on their cond., but also directly on temp. When glass is heated, the coeff. of secondary electron emission, σ, reaches a max. of 3 at 300°. NaCl crystals have a max. σ of 5.5-6.1 at 500°. If NaCl is finely powdered, the same max. is reached at 250°. Powd. KI gives a max. σ of 6 at 325-50°, KBr a max. of 4 at 250° and KCl a max. of 7 at 375-400°. Up to 700°, σ for mica remains about 1. H. M. Leicester

CA

3

A form of emission of electrons extracted by the electric field. M. M. Vudynskii. *Zhur. Tekh. Fiz.* 20, 1309-10 (1950).—Complete analogy between electron emission from a dielec. produced by the application of an elec. field, and the emission produced by electron bombardment of the surface, was demonstrated by expts. with very thin layers of Al_2O_3, carried on Al, and covered on the other side by a discontinuous thin layer of Pt. These condensers were made by coating Al with sputtered Pt, followed by electrolytic anodic oxidation on the contact side; in this process, Al_2O_3 formed between the Al and the Pt, sepg. the two metals and disrupting their direct contact. Under an applied voltage of 10^6 v./cm., the Al_2O_3 emits electrons across the discontinuous Pt coating. The curve of the emission intensity as a function of the applied voltage is no different from the emission curve under electron bombardment. Consequently, the two phenomena have the same mechanism. The emission is accompanied by intense sparking. Similar results were found with a mica foil 4–10 μ thick, covered on one side with a discontinuous Pt net, and on the other side with a thin semi-transparent layer of Pt. Emission, accompanied by the appearance of flame protuberances, was observed under 1500 v. N. Thon



CA

The depth of extraction of secondary electrons. M. M. Vudynskii. *Uchlady Akad. Nauk S.S.S.R.* 82, [illegible]. The coeff. σ of secondary-electron emission was detd. at different points of a wedge-shaped film of Ag produced by condensation, under primary-electron voltages V_p ranging from 300 to 9000 v., primary current not over 10^{-5} amp. With sufficient thickness d of the film, σ is independent of it; however, beginning from a certain crit. thickness, σ begins to decrease with decreasing d. The crit. d_0 increases linearly with V_p. This is evidently because d_0 is the max. depth from which secondary electrons are yield. Below the thickness d_0 the no. of secondary electrons passing from the carrier (Al or mica) into the Ag film is apparently reduced through a potential barrier between the carrier and the film. With an Al support, this blocking layer could be a film of Al_2O_3. With very thin Ag films, the majority of the secondary electrons come from the carrier. If it is metallic, σ will approach the value characteristic of the metal (in this instance, Al); if it is a dielectric, σ tends to unity. The linear dependence of d_0 on V_p can be represented by $d_0 = \lambda V_p + d_1$, with $\lambda = 3.4 \times 10^{-7}$ cm. N. Thon

VUDYNSKIY, M.M.

AUTHOR: YASNOPOL'SKIY, N.L., DYKLOP, A.E. 109-6-17/17

TITLE: Interdepartmental Seminar on Cathode Electronics. (Mezhduvedomstvennyy seminar po katodnoy elektronike, Russian)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol 2, Nr 6, pp 814-816 (U.S.S.R.)

ABSTRACT: At the 5. meeting on the 8. April 1957 the following lectures were delivered:

M.M.VUDYNSKIY showed that irradiation of the screen surfaces of electron beam tubes by a de-focussed bundle leads to the production of three kinds of dark spots on the screen. On this occasion the surface potential of the non-conductor changes in two stages.

I.P.ZAKIROVA and S.A.FRIDRIKHOV gave a report on the kinetics of the production of a charge on the non-conductor surfaces (glass, mica) under the effect of a bombardment by electrons (in the interval of from 20 to 15000 eV).

G.S.KOZINA spoke about the peculiarities of the secondary emission of thin free aluminum oxide films (0,05 - 0,2 μ).

M.M.VUDYNSKIY gave a short report on the dependence of the coefficient of secondary electron emission upon the angle of incidence of the primary electrons for mica and semiconductor glass.

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109-6-17/17

Interdepartmental Seminar on Cathode Electronics.

V.B.KRUSSER gave a survey of the history, the present stage, and the ways of development of transmission television tubes in the U.S.S.R. He indicated the ways and means of further development. (With 3 Slavic References).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 20.4.1957
AVAILABLE: Library of Congress

Card 2/2

Vudynskiy, M.M.

AUTHOR: Vudynskiy, M.M. 109-10-14/19

TITLE: Dependence of the Coefficient of the Secondary Electron Emission on the Incidence Angle of the Primary Electrons (Zavisimost' koeffitsienta vtorichnoy elektronnoy emissii ot ugla padeniya pervichnykh elektronov)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.II, No.10, pp. 1301 - 1303 (USSR).

ABSTRACT: Experimental curves of the secondary emission coefficient σ as a function of the energy of primary electrons V for various incidence angles of the primary electrons were measured for a number of materials. The measurement of σ was done by means of the single-pulse method proposed by the author in an earlier work (Ref.2) and also by the thermal method. Curves of σ as a function of V are shown in Fig.1 for the following materials: KCl, Al_2O_3, two types of glass and a material known as cryolite. Fig.2 shows σ as a function of V for a semi-conducting glass for five different incidence angles, while analogous curves for mica are shown in Fig.3. Fig.4 illustrates the dependence of σ on the incidence angle of the primary electrons, both for the glass and for mica; Curve 1 of Fig.4 was taken at V = 175 eV and Curve 2 at V = 200 eV. There are 4 figures and 2 Slavic references.

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109-10-14/19

Dependence of the Coefficient of the Secondary Electron Emission on the Incidence Angle of the Primary Electrons.

SUBMITTED: December 21, 1956

AVAILABLE: Library of Congress

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VUDYNSKIY, M.M.

AUTHOR: Vudynskiy, M.M. 109-3-9/23

TITLE: Some Problems in the Charging of Dielectrics (Nekotoryye voprosy zaryadki dielektrikov)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol. III. No.3, pp. 386 - 394 (USSR).

ABSTRACT: If a dielectric is irradiated by a beam of slow electrons, it collects a negative charge, as a result of which the dielectric surface takes a potential near to that of the potential of the electron source. Consequently, no additional electrons are collected by that region of the surface which has a potential near to that of the electron source. If the dielectric is a luminescent substance, its charged region will be seen as a dark spot. Such regions can appear in any part of a luminescent screen or they can cover even the whole surface of the screen. The problem of the mechanism of the formation of dark spots was first investigated by the author in 1948.(see Ref.1). A more thorough investigation is reported in the present article. The experiments described were carried out by means of a Soviet kinescope, type 18ЛК15, having a magnetic focusing coil. The luminescent screen of the tube consisted of zinc sulphide and Cd + ZnS which were activated by Ag and bound together by potassium silicate. The electrical measuring

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equipment, shown in Fig.1, was used to form the dark spots and to store negative charges on the luminescent screen. For this purpose, the energy of the primary electrons was adjusted to below a certain value V_1 (by means of the potentiometer R_2). The potential difference between the cathode and the anode, i.e. the collector of the secondary electrons, was measured by the voltmeter B . The beam of the primary electrons was de-focused. The active surface of the screen was 25 cm^2. Three types of dark spots were observed: fixed, mobile and rotational. A fixed dark spot obtained at the irradiating energy of 220 eV is shown in Fig. 2a. Fig. 26 shows a mobile dark spot, while a rotational dark spot is shown in Fig. 2b. Also, the surface potential of the irradiated dielectrics was recorded for various conditions of the luminescent screen. It was found that the potential increases as a function of time and after a certain time t_1 reaches a steady value (see Fig. 3). The time t_1 corresponds to the instant of formation of a dark spot and it can be regarded as the formative time; t_1 is greatly dependent on the magnitude of the irradiating current (see Fig.4) and

it is also a function of the electron energy, as can be seen from Figs. 5 and 6. A brief theoretical explanation of the above results is given and a new method for the measurement of the surface potential of dielectrics is outlined. There are 6 figures and 3 references, 2 of which are Russian and 1 German.

SUBMITTED: October 15, 1956

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Card 3/3

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SOURCE: Ref. zh. Elektronika i yeye primeneniye. Abs. 2A22

AUTHOR: Vudynskiy, M. M. 44,55

TITLE: About the constants and some physical laws 2], 44,55

CITED SOURCE: K voprosu o konstantakh i nekotorykh zakonakh fiziki. Mosk. avtomekhan. in-t. M., 1964, 17 str.

44,55

TOPIC TAGS: physical constant, physical law, generalized physical constant, generalized physical law, physics, theoretic physics

TRANSLATION: It has been shown in the author's work "To the problem of constants and some physical laws" that the thermal constants can be expressed in terms of electron charge ε, velocity of light C in vacuum, and one of the thermal constants, e. g., the Wien constant b. Indeed, the dimension of the constant D equals to the product of dimensions of ε, C, b raised to certain powers α, β, γ, i. e.,

$[D] - M^m, S^l, T^t, \quad r_0 = [\varepsilon]^\alpha \cdot [C]^\beta \cdot [b]^\gamma = \left(\frac{M^{1/2}S^{3/2}}{T}\right)^\alpha \left(\frac{S}{T}\right)^\beta (ST_0)^\gamma;$

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Therefore, $m=1/2\alpha$, $t=3/2\alpha+\beta+\tau$ $t=-\alpha-\beta+\tau=\gamma$, thence we find α, β, γ; and $D=\Pi e^{1mC-t-1mb^\tau}$ (1) or $D=P\mu^{1mC-tb^\tau}$ (1) Here μ is the magnetic charge, Π and P are the dimensionless factors different for different constants. The equations (1) hold true with $\tau = l + t - m$, where l, t, m, and τ are the dimension indices of the length S, time T, mass M, and temperature T_o of the unknown constant D, respectively. With $\tau = 0$, the equations (1) become the equations of the world constants in terms of ε and C; here, $D=\Pi e^{1mC-t-1m}$ and $D=P\mu^{1mC-t}$ (2B), and the condition (2) becomes $l + t - m = 0$ (2A). The dimension of all thermal constants satisfied (2) and all world constants,(2A); here lies the difference between them. It follows from (2) that the quantities with one dimension only, such as mass (e.g., electron mass), length, time, or temperature cannot serve as constants. The equations (1) permit compiling a 3-dimensional table of constants by arranging, for example, 2m in rows, and -t-2m, in columns (Table 1), or else m in rows, and t, in columns (see RZhEiP, 1963, 12A8; 1964, 5A4), with the quantity τ indicated for each constant. Different temperature planes of the table correspond to different τ. The world constants in the Table 1 are in the plane $\tau = 0$, while the known constants, in the diagonal t = -1. Thermal constants are situated in the column m = 1, in which also the Plank constant h for various τ is given. Table 1 shows that the constants D can be expressed in terms of ε, C, b with interger exponents.

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Here, the ratio of constants along the row is ε, along the column is C, along the perpendicular is b; along the diagonal $t = -1$ occupied with the world constants, the ratio is ρ, along the second diagonal, the ratio is D_x; here $D_x = \Pi \in C$; apparently, D_x is also a constant. Each constant is associated with a definite physical law. For example, ε is associated with the Coulomb law $FS^2 = \varepsilon^2$ (A). The product of force F and the square of the distance S between electrons equals ε^2. According to Einstein, the energy W/ρ equivalent to the unit of mass equals C^2, i. e., $W/M = C^2$ (B). The Wien law $b = \lambda T_0 (C^1)$, etc. Therefore, the 3-dimensional table of constants is also a table of physical laws. The association between the constants (formulas 1 and 2B) is a consequence of the interrelation among the physical laws. The connection can be realized between two (A), (B), or for thermal laws ($\tau \neq 0$) between three (A), (B), (C^1) physical laws. It follows that: (a) the action of three or even two, (A) and (B), fundamental physical laws predetermines the action of all other laws; and (b) by means of these fundamental laws, all other laws can be established.

The equation connecting some physical laws.

The physical quantities $x(M^m, S^l, T^t)$, whose dimension does not satisfy condition (2) or (2A) are not constants but rather depend on some other physical quantities η;

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If x and η^{δ} are connected by the constant D, the relation between x and η^{δ} can be determined from the condition that the dimension of the product $x\eta^{\delta}$ equals to the dimension of the constant D, i. e., $[x(M^m, S^l, T^t)\eta^{\delta}] = [D]$; therefore, $x(M^m, S^l, T^t) = D\eta^{-\delta}$. Substituting D from (1), we obtain: $x(M^m, S^l, T^t) = \Pi e^{\alpha m} C^{-t-\alpha m} b^t \eta^{-\delta}$ (3)

the fundamental equation of some physical laws.

Laws of thermal radiation.

If η^{δ} equals to temperature T_0^{τ}, $\eta^{\delta} = T_0^{\tau}$, then the equation (3) will be:

$x(M^m, S^l, T^t) = \Pi e^{\alpha m} C^{-t-\alpha m} b^t T_0^{-\tau}$. (4)

By determining from (2), we obtain $x(M^m, S^l, T^t) = \Pi e^{\alpha m} C^{-t-\alpha m} b^{t+\tau m} T_0^{m-t-\tau}$. (5)

The equation (5) establishes the effect of temperature on the physical quantities x. It follows from (5) that the constant D and the temperature index $\tau = l + t - m$ are single-valuedly determined by the dimension (m, l, t) of the physical quantity x. If x is energy W, it can be only a first-degree function of the temperature because the energy dimension is $[W] = MS^2/T^2$, for which m = 1, l = 2, t = -2 (6). By substituting m, l, and t from (6) into (5), we obtain $x = W = \Pi \frac{e^{\alpha}}{b} T$.

In Table 1, $\Pi \frac{e^{\alpha}}{b} = K$ is the Boltzmann constant; hence, the Boltzmann fla: $W = KT_0$.

Quantity x equal to the integral radiation intensity I per unit time from a unit surface can be proportional only to T_0 in the fourth power. The dimension $[I] = M/T^3$; for it: m = 1, t = -3, l = 0 (7). By substituting (7) into (5), we obtain $I = \Pi \frac{\varepsilon^4 C}{\delta^4} T_0^4$. In Table 1, $\Pi \frac{\varepsilon^4 C}{\delta^4} = \sigma$ is the Stefan-Boltzmann constant; therefore, $I = \sigma T_0^4$ is the Stefan-Boltzmann law. A similar effect of T_0 must be exerted on the energy of thermal radiation in a unit volume; $W_\varepsilon = \Pi \frac{\varepsilon^3}{\delta^4} T_0^4$ and all physical quantities for which l + t - m = -4.

X having a dimension equal to the maximum intensity of monochromatic radiation at any wavelength, according to (5) must be proportional to T_0^5 because l + t - m = -5. By a similar technique, the Wien law can be deduced from (5), etc. Absence of thermal laws in which x would be proportional to T_0^2 or T_0^3 can be explained only by the fact that the physical quantities with such a dimension have no practical consequence. However, the radiation power, according to (5), would be equal to $x = \Pi \frac{\varepsilon^4 C}{\delta^4} T_0^2$. A physical quantity with a dimension of thermal-energy flux would be proportional to the cube of temperature, etc. Thus, the equation (5) permits deducing all known thermal laws and predicting new laws. To predict the temperature dependence of a physical quantity associated with thermal radiation, it is necessary to specify the dimension of that quantity. Then, the constant D and the

temperature index τ will be automatically determined in the equation (5).

Laws determined by world constants.

For the world constants, $\tau = 0$, the equation (3) can be written as:

$$x_1(M^{m_1}, M^{m_2} S^{l_1}, T^{t_1}) = \Pi \varepsilon^{2m_2 C^{-l-2m_2}} \eta (M^{m_2}, S^{l_2}, T^{t_2})^{-\varepsilon},$$

where $x(M^{m_1}, S^{l_1}, T^{t_1})$ is the sought physical quantity (e.g., force, energy, etc.) with a dimension of $[x] = M^{m_1}, S^{l_1}, T^{t_1}$; and $\eta(M^{m_2}, S^{l_2}, T^{t_2})$ is the quantity (e.g., mass, distance, etc.) on which x depends. In this equation, $m = m_1 + m_2$, $l = l_1 + l_2$ and $t = t_1 + t_2$; therefore,

$$x(M^{m_1}, S^{l_1}, T^{t_1}) = \Pi \varepsilon^{2(m_1+m_2)C^{-(l_1+l_2)-2(m_1+m_2)}} \eta \times (M^{m_2}, S^{l_2}, T^{t_2})^{-\varepsilon}. \quad (8)$$

in this case, the condition (2A) will be $l_1 + l_2 + t_1 + t_2 - m_1 - m_2 = 0$ (10). Let us assume that $x(M^{m_1}, S^{l_1}, T^{t_1})$ is the energy W whose dimension is $[W] = MS^2/T^2$; therefore, $m_1 = 1$, $l_1 = 2$, $t_1 = -2$ (11). Let us find the dimension $\eta(M^{m_2}, S^{l_2}, T^{t_2})$ on which the energy might depend. Let us substitute the values m_1, l_1, t_1 for energy from (11) into (10). We will see that W might depend on

$\eta(M^{m_2}, S^{l_2}, T^{t_2})$ whose dimension satisfy the condition $l_2 + t_2 - m_2 = 1$ (12). Let us take η for which $l_2 = 0$, $m_2 = 0$ in (12); then $t_2 = 1$ (13). In this case, η^{δ} will be a physical quantity with a dimension of time, e. g., period T, i. e., $\eta^{-\delta} = T^{-t_2} = \frac{1}{T}$. By substituting $\eta^{-\delta} = 1/T$ and (11) and (13) into the equation (8), we obtain $W = \Pi \frac{e^2}{C} \frac{1}{T}$ (14). In Table 1, $\Pi \frac{e^2}{C} = h$ is the plank constant. Therefore, $W = h/T$, and for a frequency ν, we obtain $W = h\nu$ quanta of energy. Let in (12), $l_2 = 0$, $t_2 = 0$, then $m_2 = -1$ (15), and $\eta^{-\delta} = M^{-m_2} = M$ (16) is a mass. By substituting (16), (11), and (15) into (8), we obtain the mass-energy relation $W = \Pi MC^2$. As C is a fundamental constant, $\Pi = 1$ and $W = MC^2$ or the Einstein law. Let in (R) $t_2 = 0$, $m_2 = 0$, then $l_2 = 1$ (17); therefore, $\eta^{-\delta} = S^{-l_2} = \frac{1}{S}$ (18). By substituting (18), (11), and (17) into (8), the effect of distance S_2 upon the energy W will be obtained where $W = \Pi \frac{e^2}{S}$, ; as e is a fundamental constant, $\Pi = 1$ and $W = e^2/S$ is the formula for the energy of field of a charge. Let $x(M^{m_1}, S^{l_1}, T^{t_1}) = P_o$ be the momentum for which $m_1 = 1$, $l_1 = 1$, $t_1 = -1$. By substituting this data into (10), we obtain $l_2 + t_2 - m_2 = 1$ which is a condition for the dimension η^{δ} on which P_o, similar to (12) may depend. Therefor, P_o depends

on time, mass, distance, and their reciprocals in the same way as the energy but the constants will be different. A similar operation results in $P_0 = h\nu/C = mC = \frac{h}{S}$. If $x(M^{m_1}, S^{l_1}, T^{t_1}) = F$ is a force, whose dimension is $[F] = MS/T^2$, then for the force $m_1 = 1$, $l_1 = 1$, $t_1 = -2$ (19). By substituting this data into (10), we obtain $l_2 + t_2 - m_2 = 2$ (20). The dimension η^δ on which the force depends must satisfy the condition (20). Let in (20), $t_2 = 0$, $m_2 = 0$, then $l_2 = 2$ (21) and $\eta^{-\delta} = S^{-l_2} = 1/S^2$. By substituting m_1, l_1, t_1 from (19) for the force F and also l_2, t_2, m_2 from (21) and $\eta^{-\delta} = 1/S^2$ into (8), we obtain $F = \Pi\epsilon^2/S^2$. Here again, $\Pi = 1$ and $F = \epsilon^2/S^2$ which is the Coulomb law. Let us consider an unknown case of the force $x(M^{m_1}, S^{l_1}, T^{t_1}\eta) = F$ dependent on mass, i. e., let in (20), $t_2 = 0$. $l_2 = 0$; then, $m_2 = -2$ (22); therefore, $\eta^{-\delta} = M^{-m_1} = M^2$. By substituting $\eta^{-\delta} = M^2$ and the (19) and (22) data into (8), we obtain $F = \Pi\frac{C^4}{\epsilon^2}M^2$. In Table 1, the quantity $\Pi\frac{C^4}{\epsilon^2} = D_3^2$, where D_3 is a possible constant situated to the left of C and equal to $D_3 = 1.923 \times 10^{30}$ CGSE units according to M. M. Vudynskiy; therefore, $F = M^2D_3^2$. This is the relation between the unknown forces, mass, and unknown constant D_3. A huge value of these forces should be noted. It could be shown in a similar

way (Table 2) that (with $l_2 = 0$, $m_2 = 0$, but $t_2 = 2$ in equation (20))the force is inversely proportional to the square of a physical quantity that has a dimension of time. In Table 2, a number of known and possible formulas derived from equation (3) are given for the energy and force and their dependence on the physical quantities having complicated dimensions and satisfying (12) and (20). The equation (3) shows that if only two or three fundamental physical laws have been discovered, an infinite number of other laws associated with those discovered can be predicted by using the equation connecting these laws. Table 1 gives all (except the gravitational constant) known and some possible constants, and also known and possible physical laws derived from equation (3). All constants are expressed in terms of ε and C; hence, ε and C determine the form and content of several physical laws. Aging of ε or C must entail aging of all other constants. It should be noted that similar formulas, equations, and tables of constants and laws can be obtained if ε is substituted by the nuclear charge (for strong interaction) or by a weak-interaction charge which possesses the dimension identical with ε. The difference will lie in the magnitude of dimensionless factors and in the magnitude of magnetic charges that correspond to different interactions.

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Table 1. Constants

ENCLOSURE: 01

$l-2m$ \ $2m$	6 -2	-1	0	1	2	3
-2					$F=C\frac{v^2}{S^2}$ $[C']=v^2$	$D_c=\Pi\frac{c^2}{C}$ $P_c=\frac{D_c}{P_m}$
-1				$\mu=\Pi\frac{c}{C}$ $\Pi=\frac{1}{2\pi}$	$h=\Pi\frac{c^2}{C}$ $W=hv$ $\Pi=\frac{2c}{\alpha}$	
0			b $b=\lambda r_0$ $\tau=1$	c $\Pi=1$	$K=\Pi\frac{c^2}{b}$ $F=\frac{c^2}{S^2}$ $W=KT_0$ $\Pi=\frac{\Pi_0}{\xi}$ $\tau=-1$	
1			C $\Pi=1$	$D_g=\Pi_0 C$ $\Pi=?$	$\epsilon=\Pi\frac{c^2}{b^2}C$ $l=r_0^2$ $\Pi=\frac{2c^2}{15}\frac{\Pi_0}{\xi^2}$ $\tau=-4$	

Card 10/13 Continued on Encl. 02

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Continued from Enclosure 01

ENCLOSURE : 02

2		$D_c=\Pi\frac{C^2}{c}$ $\Pi=1$	$W=MC^2$		$F=C'\frac{D_c^2}{S^2}$ $[C']=\frac{1}{g^2}$	
3	$D_c=\Pi\frac{C^2}{c^2}$ $\tau=D_{gr}$ $\Pi=\frac{\alpha}{2\pi}$					
4	$F=M'D_3^2$ $F=\varepsilon\frac{D_3^2}{S^2}=\varepsilon\frac{P^2}{S^2}$					

F - force; M - mass; W - energy; P_o - momentum; P_m - magnetic moment; ϑ - frequency; λ - wavelength; α - fine-structure constant; $\varepsilon = 4.9651$; C' C'' x - dimension coefficients; μ - magnetic charge; D_1 D_3 D_x - unknown constants; b K σ - thermal constants

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ENCLOSURE: 03

Table 2. Constants

Table 2. Constants

i_s \ m_s	−2	−1	0
−2	$i_c=1$ $W=\Pi\frac{C_3}{c^3}\frac{M^2T^6}{S}$	$i_c=2$ $F=\Pi\frac{C^4}{c^3}\frac{M^2T^6}{S^2}$	$i_c=2$ $W=\Pi C^2\frac{M^2T^6}{S^2}$	$i_c=3$ $F=\Pi C^4\frac{M^2T^6}{S^6}$	$i_c=3$ $W=\Pi\epsilon^2C\frac{T^6}{S^6}$	$i_c=4+$ $F=\Pi\epsilon^2C^2\frac{T^6}{S^6}$
−1	$i_c=0$ $W=\Pi\frac{C^3}{c^3}MT$	$i_c=1$ $F=\Pi\frac{C^4}{c^3}M^2\frac{T}{S}$	$i_c=1$ $W=\Pi C^2\frac{MT}{S}$	$i_c=2$ $F=\Pi C^4\frac{MT}{S^2}$	$i_c=2$ $W=\Pi\epsilon^2C\frac{T}{S^2}$	$i_c=3+$ $F=\Pi\epsilon^2C\frac{T}{S^2}$ $F=\frac{1}{\varphi}\frac{D_c^2}{S^2}$

Card 12/13

Continued on Enclosure 04

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Continued from Enclosure 03 ENCLOSURE: 04

0	$l_s=-1+$ $W=\Pi\frac{C^4}{c^5}M^4S^4$	$l_s=0+$ $F=\Pi\frac{C^2}{c^2}M^2$ $F=D_s^2M^2$	$l_s=0$ * $W=MC^2$	$l_s=1$ $F=C^2\frac{M}{C}$	$l_s=1$ * $W=\frac{c^2}{S}$	$l_s=2$ * $F=\frac{c^2}{S^2}$
+1	$l_s=-2$ $W=\Pi\frac{C^2}{c^2}\frac{M^2S^2}{T}$	$l_s=-1$ $F=\Pi\frac{C^2}{c^2}\frac{M^2S}{T}$	$l_s=-1$ $W=\Pi C\frac{MS}{T}$	$l_s=0$ $F=\Pi C\frac{M}{T}$	$l_s=0$ * $W=\Pi\frac{c^2}{C}v$ $W=kv$	$l_s=1+$ $F=\Pi\frac{c^2}{C}\frac{1}{ST}$ $F=k\frac{1}{ST}$
+2	$l_s=-3$ $W=\Pi\frac{C^2}{c^2}\frac{T^2}{S}$	$l_s=-2$ $F=\Pi\frac{C^2}{c^2}\frac{M^2S^2}{T^2}$	$l_s=-2$ $W=\frac{MS^2}{T^2}$	$l_s=-1$ $F=\frac{MS}{T^2}$	$l_s=-1+$ $W=\Pi\frac{c^2}{C^2}\frac{S}{T^2}$ $W=qU$	$l_s=0+$ $F=\Pi\frac{c^2}{C^2}\frac{1}{T^2}$ $\Pi=\varphi^2\frac{\mu^2}{S^2}$

* known; + possible laws; Π - dimensionless factor; v - velocity; U - acceleration; M - magnetic charge; D_s D_x - table constants

Card 13/13

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(Oil well drilling—Equipment and supplies)

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[Parquetry] Parketnye raboty. Moskva, Gos. izd-vo lit-ry po stroit. arkhitekture, 1956. 77 p. (MLRA 9:5)
(Parquetry)

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Late results of pneumolysis and apicolysis and their manifestations.
Suvrem. med., Sofia 7 no.12:21-33 1956.

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(COLLAPSE THERAPY,
pneumonolysis & apicolysis, late results (Bul))

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Early and late results of pneumothorax in children and adolescents.
Suvrem. med., Sofia 5 no.8:86-96 1954.

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(PNEUMOTHORAX, ARTIFICIAL, therapeutic use,
tuberc., pulm., results in adolescents & child.)

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(COLLAPSE THERAPY, apicolysis, indic.)

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(Books and libraries in ancient and contemoprary China) Kyiv, 1938. 14 p. (Odessa. Gosudar stvennaia publichnaia biblioteka. Trudy)

VUGMAN, M. Ya.

Tuning fork oscillator on transistors. Razved. i prom. geofiz. no.48:38-44 '63 (MIRA 18:1)

ACC NR: AR6020928 SOURCE CODE: UR/0196/66/000/002/V010/V010

AUTHOR: Vugman, S. M.

TITLE: Design of microminiature electric incandescent lamps

SOURCE: Ref. zh. Elektrotekhn i energ, Abs. 2V44

REF SOURCE: Nauchno-tekhn. sb. Vses. n.-i. in-t istochnikov sveta, vyp. 1, 1965, 13-19

TOPIC TAGS: microminiaturization, signal lamp, electric lamp

ABSTRACT: Characteristics, design, and uses of microminiature lamps (MML) are considered. Calculation of MML parameters according to the general formulas suitable for large size lamps brings about considerable errors. The energy balance of vacuum MML estimated from their spectral density curves includes: visible radiation, 1.5--2%, invisible radiation, 25--31%, loss, 73.5--67%. The high loss is caused by the small-size filament and by strong cooling effect of the leads. A type NSM10 x 55 having a flux of 0.7--1.0 lum, a life of 1000 hrs, and intended for signaling and indication has been developed in the All-Union Scientific Research Institute of Light Sources; also developed is a series of MML, 2.5--4.5 v, 2--8.5 lum, 10--25 hrs (life) for endoscopic instruments. One figure. Four tables. G. L'vina [Translation of abstract]

SUB CODE: 09

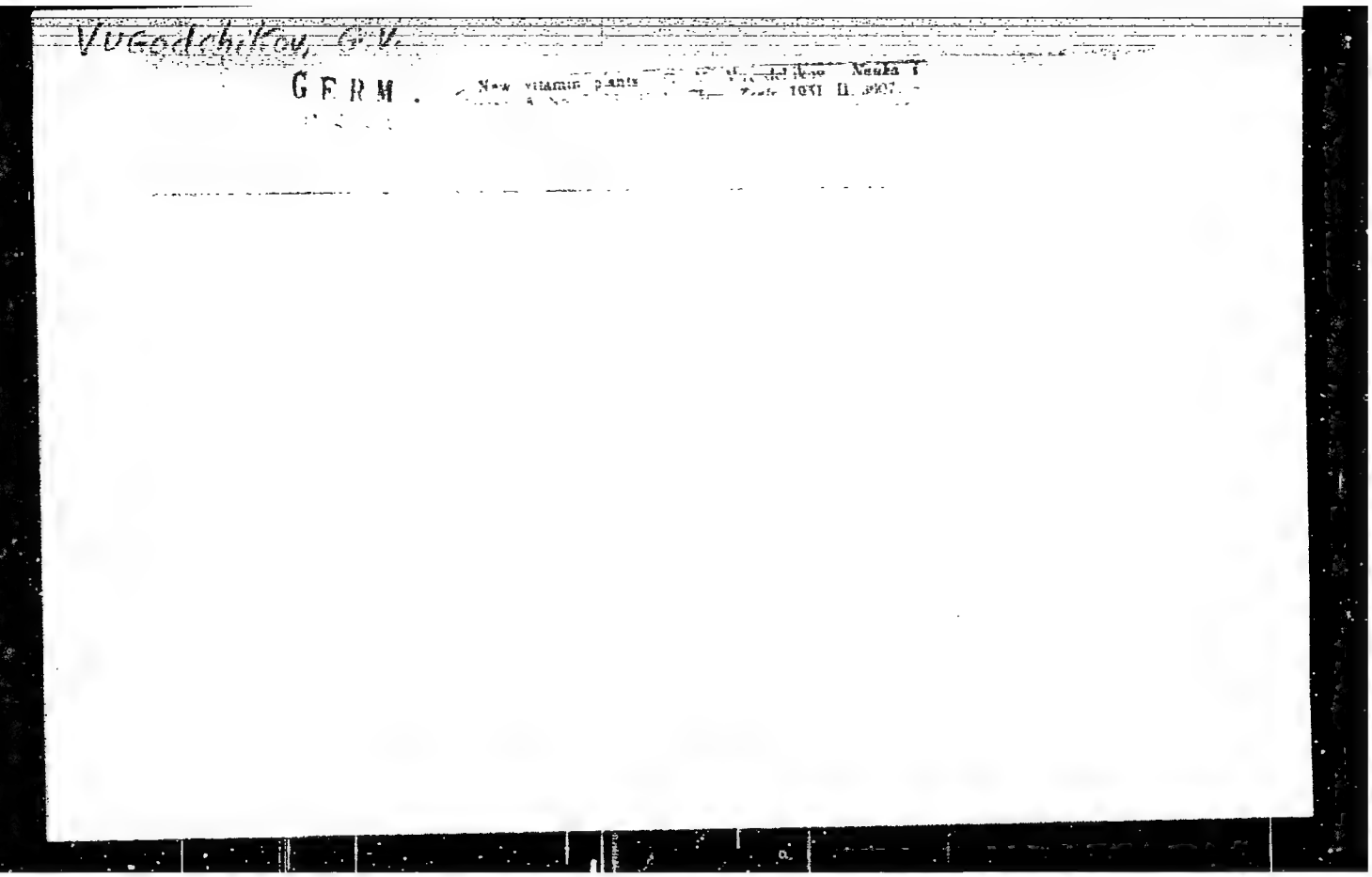
Card 1/1 UDC: 521.326.75

SKOBELEV, V.M.; YUGMAN, S.M.

Standardize refractory wire for incandescent lamps. Standartizatsiia 25 no. 5:11-12 My '61. (MIRA 14:5)
(Electric lamps, Incandescent—Filaments)

VUGMANIS, Mihails, stroitel'nyy insh.; LIEPINS, J., red.; ZAGARS, A., tekhn. red.

[What a young mason should know] Kas jazina jaunam murniekam. Riga, Latvijas Valsts izdevnieciba, 1962. 108 p. (MIRA 16:5)
(Masonry)



6729. VUGRINČIĆ Č. intern. Odd. Splošne Bolnice, Osijek. *Pomen osi hipofiza skorja nadobistnice v razvoju klinične slike kronične insuficience cirkulatornega sistema. The significance of the pituitary-adrenocortical system in the pathogenesis of chronic circulatory failure ZDRAV. VESTN. 1955, 24/1-2 (1-6)

The most outstanding feature of chronic circulatory failure is considered to be the increase of the blood volume due to adaptation to hypoxaemia, via the increased action of the pituitary-adreno-cortical system. This assumption is made plausible by the following facts: (1) Hypertrophy of the adrenal cortex is usually found at autopsy of cases of chronic circulatory failure. (2) The corticosteroid level of blood and urine is elevated. (3) There is a low renal and salivary excretion of sodium. (4) Water and salt retention is due to augmented tubular reabsorption which is due to the action of the adrenal cortex. (5) The mechanism of water and salt retention during corticosteroid therapy is the same as that of chronic circulatory failure. Water and sodium retention is the most essential consequence of the adaptation process. It is responsible for the increase of blood volume. Mikes - Banja Luka

VUGRINCIC, Cedomil

The importance of the pituitary gland and of the adrenal cortex in the development of the clinical picture of chronic circulatory insufficiency. Zdrav. vest., Ljubljana 24 no.1-2: 1-6 1955.

1. Interni oddelek splosne bolnice, osijek--predstojnik prim. Dr. Cedomil Vugrincic.

(CONGESTIVE HEART FAILURE, physiol.
pituitary gland & adrenal cortex (Sl))
(PITUITARY GLAND, physiol.
pituitary-adrenocortical system in congestive heart failure (Sl))
(ADRENAL CORTEX, physiol.
adrenocortical-pituitary system in congestive heart failure (Sl))

RES, Dusan, dipl. inz. (Ljubljana); LOGAR, Franc (Ljubljana); VUGRINEC, Joze (Ljubljana)

Apparatus for radio relay links, type PLM 1-400. Pt. 1.
Elektr vest 30 no. 10/12:280-284 '62/'63

VUGRINC, Josip, dipl. geol.; DURASEK, Stjepan, dipl. inz.; ALJINOVIC, Bruno, dipl. fiz.

Interpretation of the geophysical and geological investigations in the Sandrovac region. Nafta Jug no.1/2:10-15 Ja-F '64

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(ENCEPHALITIS) (DEMYELINATION)

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VUIC-DROLC, Zorka

Measurement of roentgen rays in veterinary medicine. Arh. za hig. rada 12 no.1:49-54 '61.

1. Institut za medicinska istrazivanja i medicinu rada.
(RADIOMETRY) (VETERINARY MEDICINE)

RUMANIA 616.988.25

DRAGANESCU, N., POPESCU, Gr., and VUIA, O., of the Institute of Inframicrobiology (Institutul de Inframicrobiologie) and the Institute of Neurology (Institutul de Neurologie) of the Academy of the Socialist Republic of Rumania (al Academiei Republicii Socialiste Romania).

"Edematous Encephalopathiy in Children (Encephalopneumonitis) Caused by Large Inframicrobia Germs."

Bucharest, Studii si Cercetari de Inframicrobiologie, Vol 17, No 5, 66, pp 395-400.

Abstract: The authors discuss virological and anatomopathological data on infants suffering from cerebral and pulmonary diseases Crossed serum neutralization reactions demonstrate that the isolated germs are related antigenically to the pararickettsia group. Histopathologically, edematous encephalopathic lesions were found both in the infants and in experimentally infected mice.

Includes 6 figures and 14 references, of which 10 Rumanian, 2 German and 2 Western.

1/1

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[English-Russian dictionary of terms in meat and meat products technology] Anglo-russkii slovar' terminov po tekhnologii miasa i miasoproduktov. Moskva, 1960. 44 p, (MIRA 17:3)

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Export of the products of machine industry, and measures for its increase. Masinogradnja 5 no.2:5-8 Jl '62.

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(GLASNIK, Vol. 6, No. 3/4, 1954, Beograd, Yugoslavia)

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 1
Jan. 1955, Uncl.

NEDELJKOVIC, Srecko; VUJADINOVIC, Borislav

Surgical treatment of aneurysm of the brachail artery in subacute bacterial endocarditis. Srpski arh. celok. lek. 88 no.11:1143-1147 N '60.

1. Interna klinika B Medicinskog fakulteta Univerziteta u Beogradu. Upravnik: prof. dr Radivoje Berovic. II Hirurska klinika Medicinskog fakulteta Univerziteta u Beogradu. Upravnik: prof. dr Vojislav Stojanovic.

(ENDOCARDITIS SUBACUTE BACTERIAL compl)
(BRACHIAL ARTERY dis) (ANEURYSM surg)

VUJADINOVIC, Borislav; TOMIC, Ljubomir; GERZIC, Zoran

Gangrenous cholecystitis with biliary peritonitis caused by Ascaris lumbricoides. Srpski arh. celok. lek. 84 no.10:1181-1184 Oct 56.

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(PERITONITIS, etiol. & pathogen.
Ascaris lumbricoides causing biliary peritonitis with gangrenous cholecystitis (Ser))
(CHOLECYSTITIS, etiol. & pathogen.
same)
(ASCARIS, infect.
gangrenous cholecystitis & biliary peritonitis caused by Ascaris lumbricoides (Ser))

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Our preliminary experience with Henley's method of intestinal transplantation. Acta chir. Iugosl. 10 no.2:134-138 '63.

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(INTESTINE, SMALL) (TRANSPLANTATION)
(GASTRECTOMY) (STOMACH NEOPLASMS)

S

VUJADINOVIC, Borislav; LEKIC, Svetomir; BELJOZOVIC, Aleksandar; PEROVIC, Miroje; ANTIC, Ratomir

Successful treatment of penetrating wound of the heart.
Srpski arh. celok. lek. 84 no.5:660-666 May 56.

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(HEART, wounds and injuries,
right ventric. penetrating wd., ther. (Ser))

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Resuscitation with the use of external massage. Srpski arh. celok. lek. 92 no.12:1236-1239 D '64.

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Embolism of the aortic bifurcation during the development of rheumatic phase of mitral stenosis successfully treated by embolectomy. Acta chir. iugosl. 6(7) no.3:245-248 '59.

1. II Hirurska klinika, Upravnik: prof. dr. Vojislav K. Stojanovic; i Interna klinika "A", Upravnik: prof. dr. Branko Stanojevic, Medicinskog fakulteta u Beogradu.
(MITRAL STENOSIS compl.)
(AORTA dis.)
(EMBOLISM compl.)

STOJANOVIC,V; RASOVIC, Lj; TABAKOVIC-DJAJA,V.; VUJADINOVIC,B.; LEKIC,S.

Sarcoma of the stomach; Acta chir. iugosl. 2 no.2-3:125-135 '55.

1. II Hirurska klinika Medicinskogo fakulteta u Beogradu (Upravnik: prof. dr. Stojanovic)

(STOMACH neoplasms
sarcoma, surg.(Ser))
(SARCOMA,
stomach, surg.(Ser))

VUJADINCVIC, R.

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VOJNO-TEHNICKI GLASNIK. Beograd, Yugoslavia. Vol. 3, no. 10, Oct. 1955.

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Uncl.

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Indirect firing with self-propelling weapons. p. 22.
(GLASNIK, Vol. 11, No. 2, Feb. 1957)

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

VUJASINOVIC, Todor

The place and tasks of machine industries. Masinogradnja 1 no.1:5-6 F '58.

VUJADINOVIC, V.

How the artificial fertilizers should be used. p. 19.
(GLASNIK, No. 3, 1956 (Published 1957)

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

YUGOSLAVIA/Cultivated Plants. Grains. H

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68083

Author : Vujadinovic, Vukasin
Inst : -
Title : The Effect of Larger Mineral Fertilizer Doses on Winter Wheat Yields.

Orig Pub : Poljopr. Vojvod., 1957, 5, No 9, 7-12

Abstract : No abstract.

Card : 1/1

VUJADINOVIC, VUKASIN

USSR/Soil Cultivation. Mineral Fertilizers. J-3

Abs Jour: Ref Zhur-Biologiya, No 1, 1958, 1257.

Author : Vujadinovic, Vukasin
Inst : .....
Title : The Significance of Mineral Fertilizers for Increasing Yields.

Orig Pub: Poljopr. Vojvod., 1956, 4, No 10, 1-11 (Serbocroatian)

Abstract: No abstract.

Card : 1/1 -28-

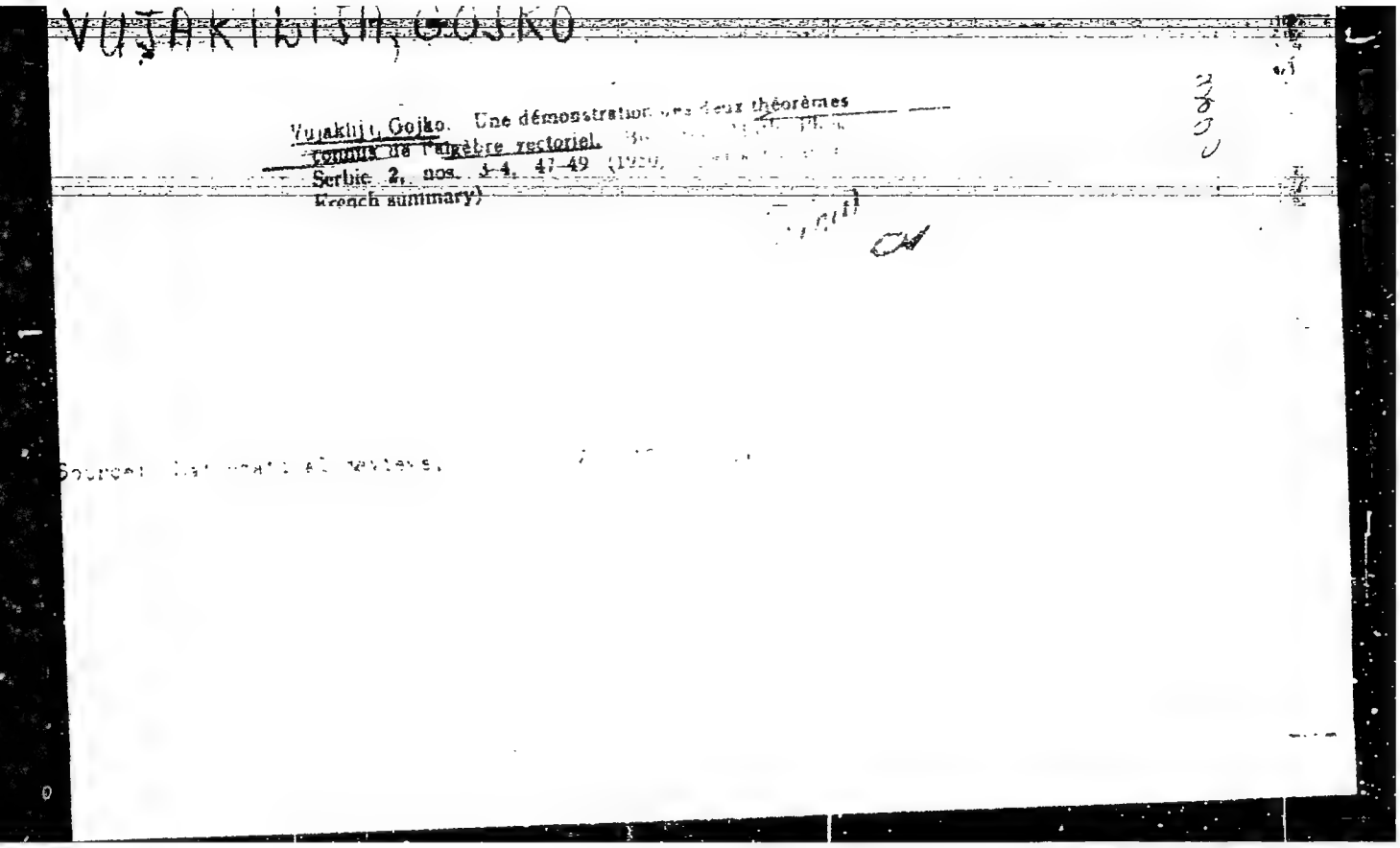
VUJAKLIJA, G.

Vujaklija, G. Sur le calcul des déterminants (Serbian)
Publ. Fac. Univ. Beograd 1946 47, 1-4 (Serbian. French summary)

[The Serbian title is A method of calculating determinants.] Let Δ be the determinant of the nonsingular matrix (a_{ik}), let Δ_1 be the determinant [of order $n-1$] of the minors of the four corner elements and let Δ_2 = the determinant of order $n-2$ of the submatrix (a_{ik}) in which the first and last rows and columns are deleted. It is shown that $\Delta = \Delta_1 \Delta_2$ and this permits reducing the order of a determinant.

W. Feller (Ithaca, N. Y.)

Source: Mathematical Reviews, Vol. 11 No. 3



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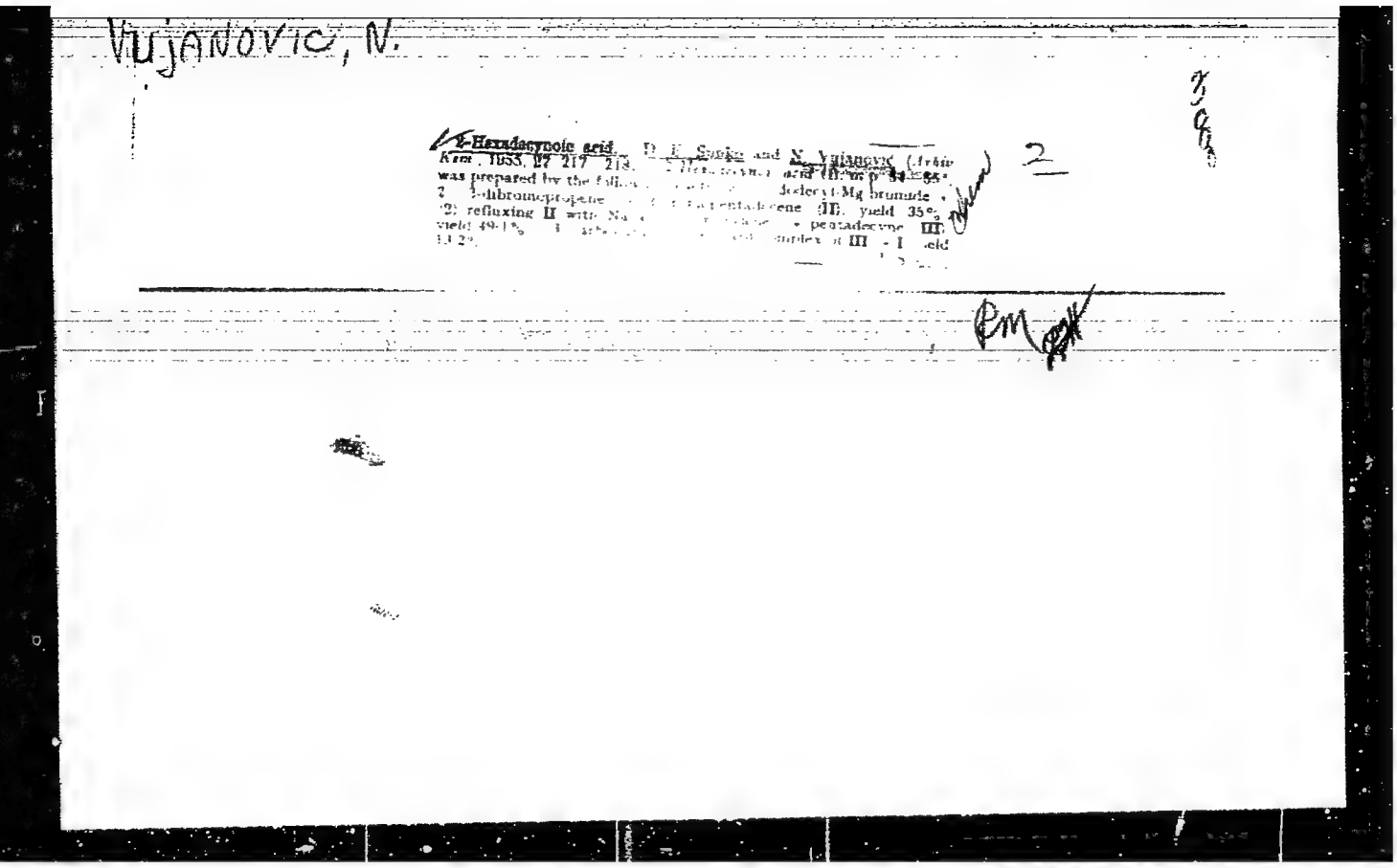

VUJANOVIC, N.

Yugoslavia/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 813

Author: Sunko, D. E., and Vujanovic, N.

Institution: None

Title: 2-hexadecynoic Acid

Original Periodical: Arhiv. kemiju, 1955, Vol 27, No 4, 217-218 (published in English with a Serbo-Croatian summary)

Abstract: To a solution of $C_{12}H_{25}MgBr$ in ether (0.315 moles of $C_{12}H_{25}Br$) are added 0.3 moles of $CH_2 = CBrCH_2Br$; the mixture is refluxed for 4 hours and hydrolyzed with dilute HCl. The yield of 2-bromo-1-pentadecyne (I) is 35%, bp 92°/0.15 mm, $n_D = 1.4690$. Thirty-nine grams of I are added (one hour at 140°) to a sample of NH_2Na (from 8.8 gms Na) dissolved in 270 ml of xylene; the mixture is refluxed for 10 hours, after which ice and concentrated HCl are added, and the 1-pentadecyne (II) is extracted with ether. The yield is 49.1%, bp 88°/0.25 mm, $n_D^{22°} = 1.4545$; 13.8 gms of II are added to an ether solution of

Card 1/2

Yugoslavia/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 813

Abstract: CH_3MgI and refluxed 17 hours. Next, the reaction mixture is saturated with CO_2; the yield of 2-hexadecynoic acid (III) is 13.2%, bp 54-55° (in petroleum ether). The product III is purified, precipitated from acetone solution as the K-salt with 5 N alcoholic KOH, and recovered by hydrolysis with dilute HCl.

Card 2/2

VUJANOVIC, Bozidar, asistent (Beograd, Srneticka 4)

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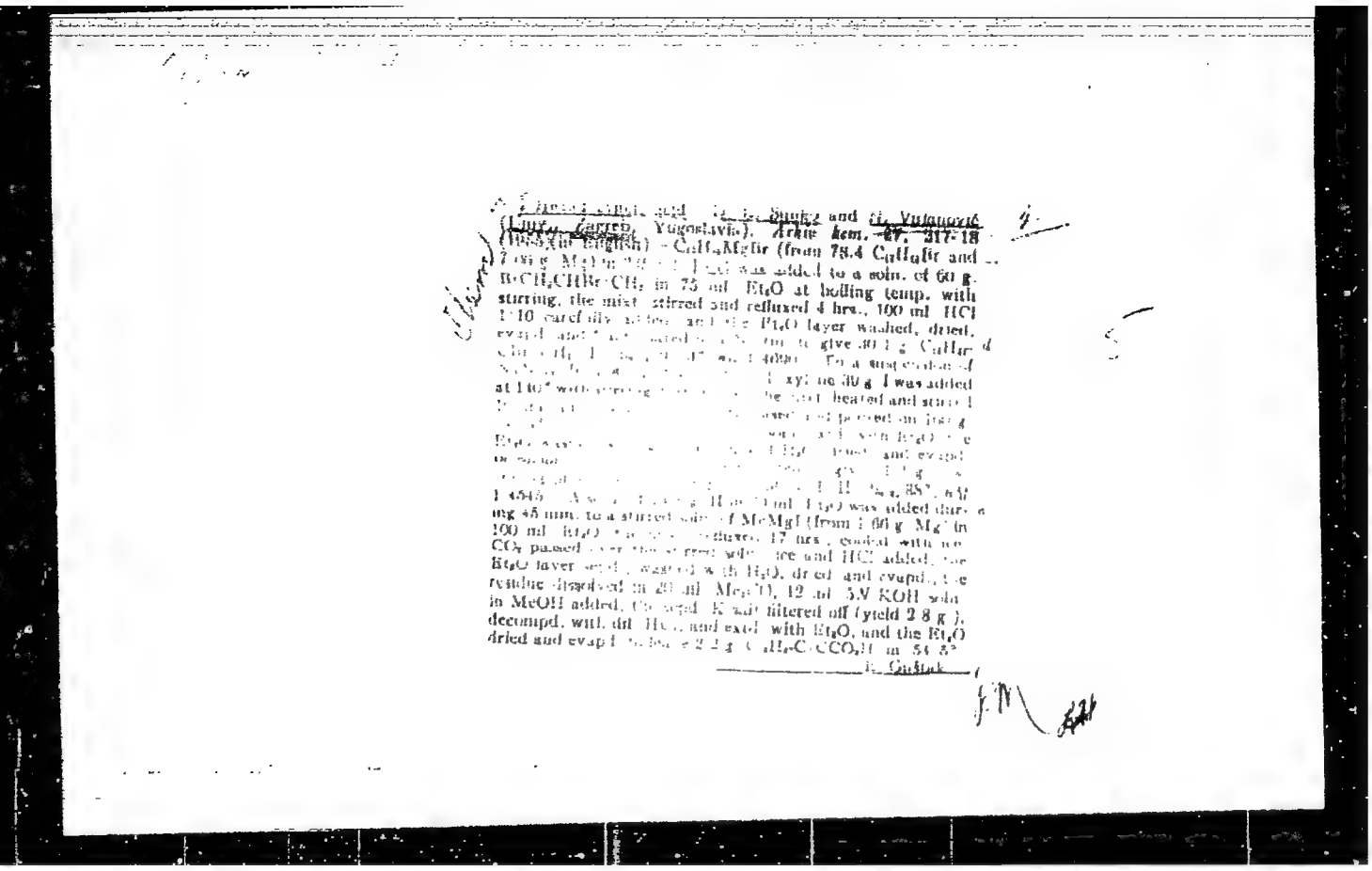

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VUJANOVIC, Vojislav

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Glas Prir muz A 14/15: 171-228 '61.

VUJANOVIC, Vojislav

Mineralogical composition and structure of minerals in the lead-zinc deposits of Brskova, Montenegro. Glas Prir mus no.13:7-28 '60.

(Lead) (Zinc)

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Mineralogy and genesis of manganese deposits of Draca near Kragujevac. Glas Prir muz A 18:57-78 '63.

1. Submitted May 17, 1963.

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so. [redacted] vol. 5, no. 10 Oct. 1956

... Volume 17, 1.

... p. 65

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VUJANOVIC, V.

Manufacture of polished abrasives made of anthracite and bituminous coal through the combined application of Treuer's system and the classic method.

p. 119 (Glasnik) Vol. 7, no. 3, 1956, Belgrade, Yugoslovia

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

VUJANOVIC, V.

The combined and combined-regenerated ore deposits.

p. 123 (Glasnik) Vol. 7, no. 3, 1956, Belgrade, Yugoslovia

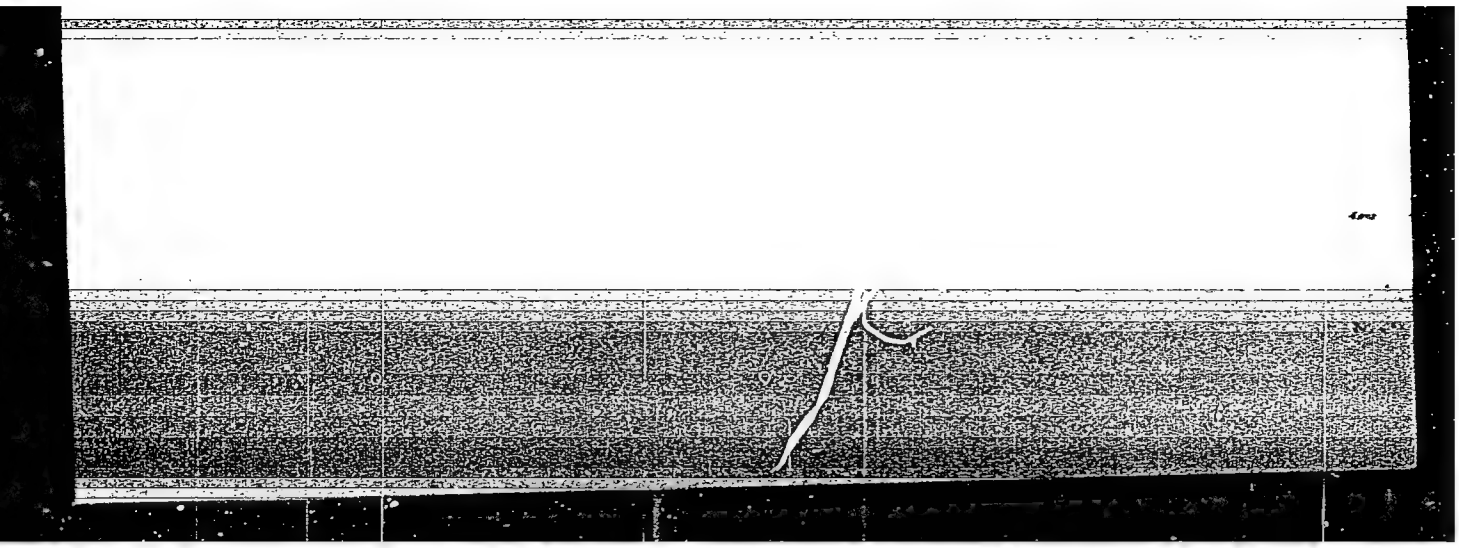
SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO.1, JAN. 1958

VUJANOVIC, V.

Smoke screening by artillery.

P. 11 (Vojni Glasnik. Vol. 10, no. 8, Aug. 1956. Beograd, Yugoslavia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958



VUJANOVIC, V.

Pyrargyrite from Železnik Blagojev Kamen East Serbia. Vojislav Vujanović. [illegible] 21, 185-8 (With German summary).—Pyrargyrite occurs disseminated in galena in hydrothermal quartz veins. Scheelite occurs in the same veins, but belongs to a higher-temp. phase.

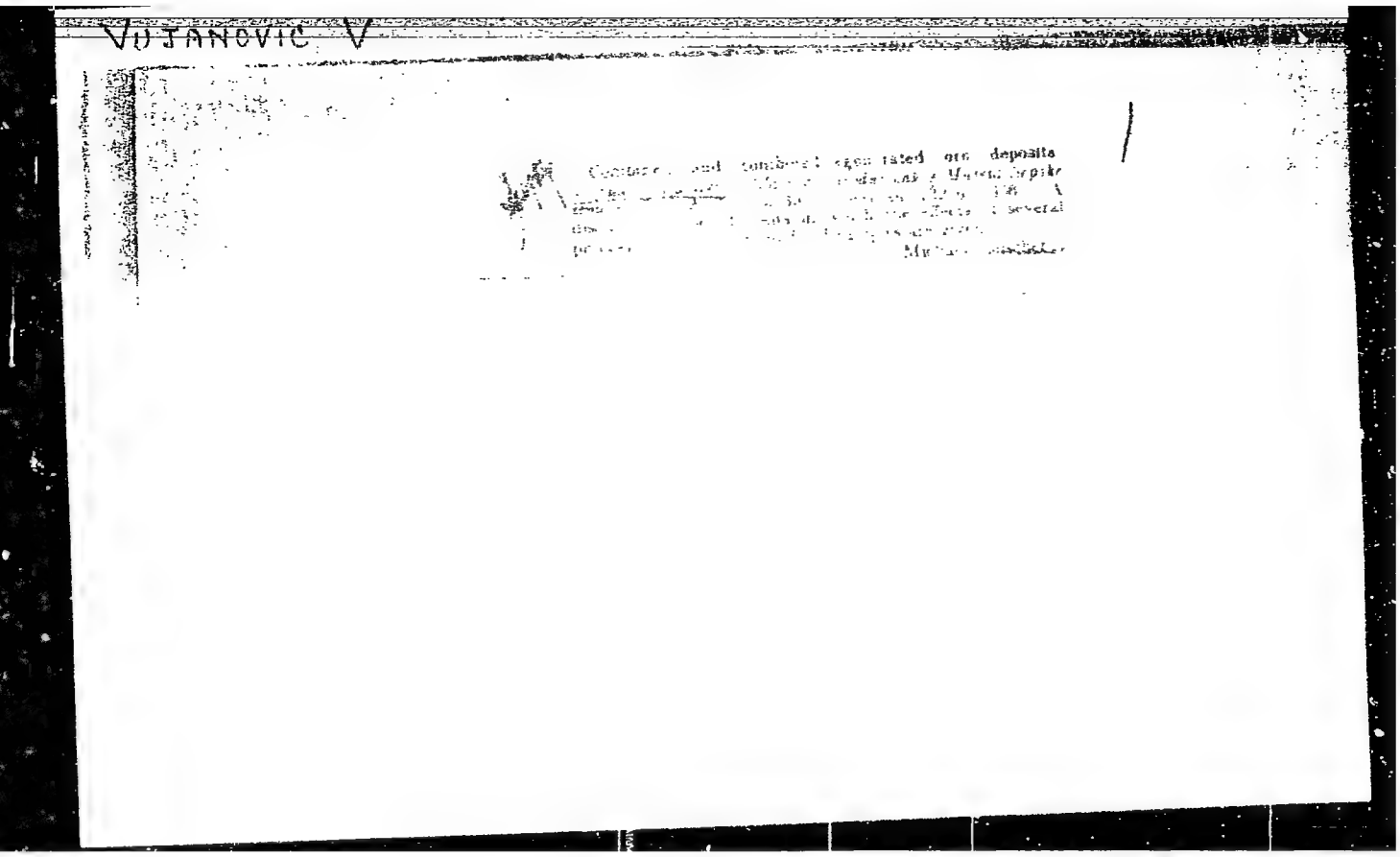
Michael Fleischer

3x

VUJNOVIC, Vladis, dr

Distribution of elements on the stars. Zemlja i svemir 6 no.4:36-39 '63.

1. Glavni i odgovorni urednik, "Zemlja i svemir".



VUJANOVIC, V.

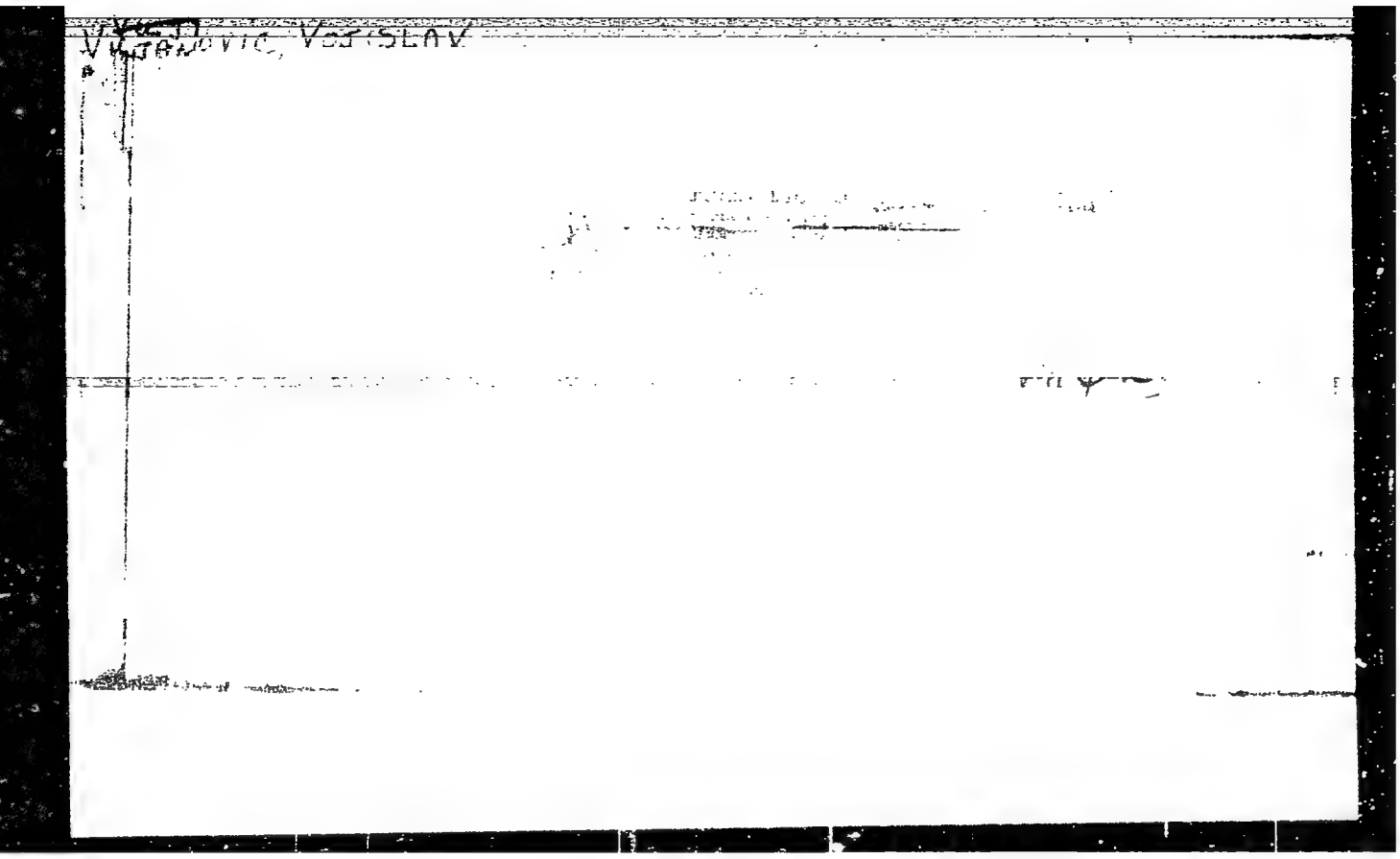
"Layers of Iron and Graphite Minerals in Ponikvica, Montenegro." P. 237. (GLASNIK. SERIJA A: MINERALOGIJA, GEOLOGIJA, PALEONTOLOGIJA. No. 5, 1952, Beograd, Yugoslavia.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

VUJANOVIC, V.

"Mineral and Ore Layers in Murin, Andrijevica, and Plav, Montenegro." P. 205. (GLASNIK. SERIJA A: MINERALOGIJA, GEOLOGIJA, PALEONTOLOGIJA. No. 5, 1952, Beograd, Yugoslavia.)

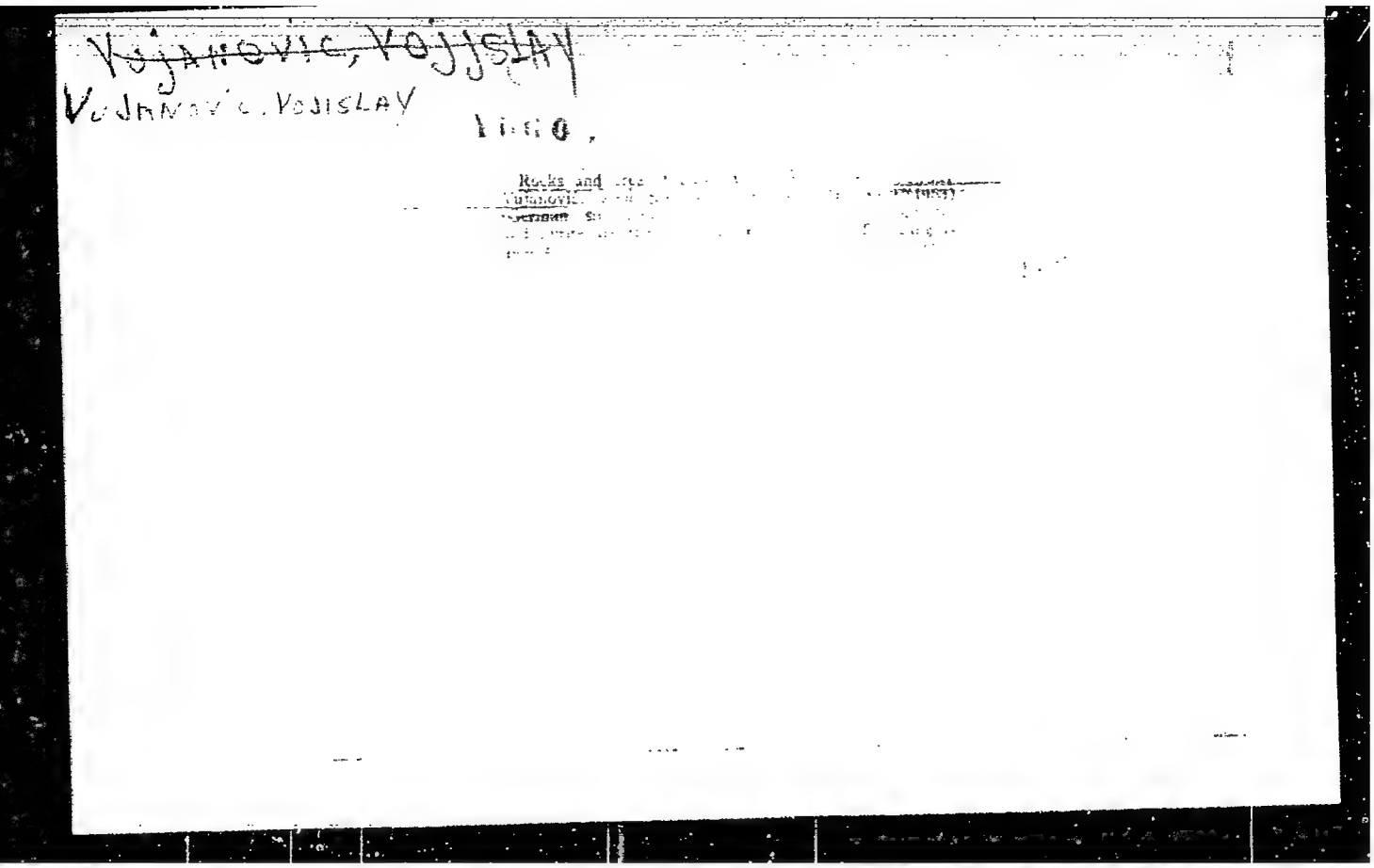
SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.



VUJANOVIĆ, VOJISLAV

V

Chalcophanite from Janjevo near Priština (Jugoslavia). Vojislav Vujanović. *Neues Jahrb. Mineral. Monatsh.* 1954, 40–7.—The rhombohedral mineral of chem. constitution $(Mn,Zn)O \cdot 2MnO_2 \cdot 2H_2O$ is a typical secondary formation. Chalcophanite occurs in the upper parts of the deposits connected with a faulty intrusion into phyllitic rocks and shales. Frequently fine intergrowths with psilomelane and other earlier secondary formations render the identification more difficult. K. H. Wedepohl



VOJANOVIC, VOJISLAV

VOJANOVIC, VOJISLAV

1960,

VUJANOVIC, Vojislav

Genetic classification of ore deposits in the Mackatica and Surdulica region. Glas Prir muz A no.11:47-108 '59.

(Yugoslavia--Ore deposits)

VUJANOVITCH, Vojislav

(2)

Minerals and ores in the region of Andrijevica, Murino, and Plav., Vojislav Vujanovitch, *Glasnik Prirod. Muscia Srpske Zemlye* (Bull. muséum hist. nat. pays Serbe), Sér A, No. 5, 205–22(1952)(French summary).—Pyrite, pyrrhotite, and minor chalcopyrite occur in ---ins in schists and quartz porphyries. Michael Fleischer

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Mineralogical and
Geological Chemistry

SOV-107-58-4-9/57

AUTHOR: Vujasinović, Todor (Vuyyasinovich, Todor) Vice-chairman

TITLE: We Rejoice at Your Success (My raduyemsya vashim uspekham)

PERIODICAL: Radio, 1958, Nr 4, p 7 (USSR)

ABSTRACT: The author describes amateur radio activity in Yugoslavia, controlled by the Union of Yugoslavian Radio Amateurs, and extends his best wishes to Soviet radio amateurs.

ASSOCIATION: TsK oboronnogo obshchestva "Narodnaya tekhnika" Federativnoy Narodnoy Respubliki Yugoslavii (The Central Committee of the Defense Organization "National Technics" of the Federal People's Republic of Yugoslavia)

1. Radio--Yugoslavia 2. Radio operators--Training

Card 1/1

VUJCIC, Ivica, dr, docent (Novi Sad, Poljoprivredni fakultet)

Degree of acidity and ripeness during the ripening process of kashkaval cheese. Tehnika Jug:Suppl.:Prehran ind 17 no.1:156-159 Ja '63.

1. Poljoprivredni fakultet u Novom Sadu.

EXCERPTA MEDICA Sec.8 Vol.11/4 Neuro.-Psychiatry Apr 58

VUJDEA, I.

2029. INVESTIGATIONS CONCERNING THE WORKING CAPACITY OF PSYCHIC PATIENTS - Citeva cercetări cu privire la capacitatea de muncă a bolnavilor psihici - Parhon-Stefănescu C. and Vujdea I. Clin. de Psihiat. 'I.M.F.', Bucuresti - NEUROL. PSIHIAT. NEUROCHIR. 1957, 2/2 (156-163)

This is a report of the results of studies carried out in 157 subjects who, after being in the hospital for psychical diseases for some time, were returned to their families. 84% either went back to their old occupation or got a less qualified position. In patients with periodic affective syndromes, the working capacity diminishes as the number of relapses increases. In general paralysis, the working capacity is better preserved the earlier that treatment is instituted. Schizophrenia is the disease which most affects the working capacity. Paranoiacs are fairly well able to work if the conditions are suitable. So far as asthenic syndromes are concerned, there are very intractable cases, which require long holidays. It is suggested that suitable institutions be established where psychical invalids can work.

Parhon-Stefănescu - Bucharest

JOVANOVIC, Vera, dipl. farm, asistent (Novi Beograd, Studentski grad 973/3);
VUJEVIC, Mirjana, hem. tehn., tehnicki saradnik

Sterility of the radioactive ^{131}J and its control. Tehnika Jug 18 no.11:Suppl:Radioizotopi zrac 2 no.11:2005-2008 N '63.

1. Institut za nuklearne nauke "Boris Kidric", Beograd-Vinca.

Vujevic, P.

Cooling power and drying power in Petrovaradin. p. 5

CROATICA CHEMICA ACTA. (Hrvatsko kemijsko drustvo, Sveuciliste u Zagrebu i Hrvatsko prirodoslovno drustvo) Zagreb, Yugoslavia. Vol. 7, no. 14, 1958

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959

Uncl.

VUJEVIC, P.

Thermal conditions of the Belgrade Meteorologic Observatory. Glas prir mat SANU no.253:115-170 '63.